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|-------------------------------|------------------------|---------------------|--|
| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                               | 09/899,329             | S. ET AL.           |  |
|                               | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                               | Krystyna Suchecki      | 2882                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Response filed 05/26/04.
  2. ☒ The allowed claim(s) is/are 1-30.
  3. ☒ The drawings filed on 05 July 2001 are accepted by the Examiner.
  4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |                                                                                                                     |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                         | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|                                                                                                                     | 9. <input type="checkbox"/> Other _____                                               |

## **DETAILED ACTION**

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Davy Zoneraich on 11/01/04.

3. The application has been amended as follows:

4. In Claim 1, replace line 18 as follows:

--central strength member structure, the outer diameters of the buffer tubes and the jacket--

5. In Claim 23, replace line 17 as follows:

--central strength member structure, the outer diameters of the buffer tubes and the jacket--

### ***Allowable Subject Matter***

6. Claims 1-30 are allowed.

7. The following is an examiner's statement of reasons for allowance: Claims 1 and 23 contain allowable subject matter for at least the reason that the prior art of record fails to teach or reasonably suggest an elongated optical fiber cable with a longitudinal axis and with more than 1000 optical fibers, said cable having a fill factor not greater than about 85% in a two inch duct and said cable comprising a central strength member, a number of buffer tubes being greater than three and less than six in number, with a plurality of optical fiber ribbon stacks loosely received in each buffer tube and a jacket as claimed. While there is a suggestion in the art in the article to

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Logan to design an optical fiber cable to have a fill factor not greater than 80% in a two inch duct, the highest loose tube fiber count cable cited in the article, LT25 in Figure 12, has a fill factor greater than 85% in a two inch duct. The nearest fiber count cable, LT8, is 200 fibers in count lower than the instant application, and meets the requisite fill factor. In both the LT25 and the LT8, there are 6 buffer tubes and a central strength member. There is no suggestion to achieve a cable having both a fill factor of not greater than 85% in a two inch duct and a number of buffer tubes greater than 3 and less than 6 around a central strength member. Both Nehei and Logan are silent as to the final dimensions of their cables, and therefor do not clearly suggest dimensions to maintain in combination with the particular fiber counts.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent to Militaru (US 6,658,187) is of interest for teaching improvements to fiber optic cables such that 3 or 4 buffer tubes surround a central strength member and the cable can fit in certain types of duct-work. Militaru teaches 24 fibers per buffer tube, and therefor fails to teach fiber ribbon stacks so that the cable has a fiber count of 1000. Patent to Fukuma (JP 63075714 A) is of interest for also teaching 4 buffer tubes in a fiber cable. Fukuma also fails to teach a 1000 count cable with a fill factor not greater than about 85% in a two inch duct.

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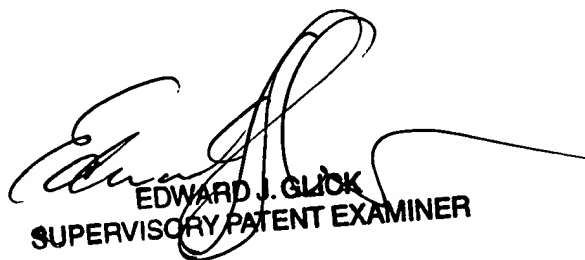
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krystyna Suchecki whose telephone number is (571) 272-2495.

The examiner can normally be reached on M-F, 9-5.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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EDWARD J. GLICK  
SUPERVISORY PATENT EXAMINER